

STATE OF VERMONT  
PUBLIC SERVICE BOARD

CPG NM-58

In Re: Petition of Vincent and Eileen Illuzzi )	Hearing at
requesting a certificate of public good for an )	Derby, Vermont
interconnected net metered wind-generated )	May 23, 2002
electrical power system located on petitioner's )	
property on Ridge Hill Drive in Derby, Vermont )	

Order entered: 7/1/2002

PRESENT: Gregg Faber, Hearing Officer

APPEARANCES: Vincent and Eileen Illuzzi, Pro Se  
George and Doris Buzzell, Pro Se  
David Blittersdorf, Pro Se  
Town of Derby Selectboard, Pro Se

**I. INTRODUCTION**

In this Proposal for Decision, I recommend that the Vermont Public Service Board ("Board") grant the petition filed by Vincent and Eileen Illuzzi ("Petitioners" or "Applicants") for a certificate of public good ("CPG") for a net metered wind generation facility in Derby, Vermont.

**II. BACKGROUND**

I held a prehearing conference in this proceeding on April 9, 2002, at the Derby Town Offices located at 124 Main Street in Derby, Vermont. In addition, I conducted a site visit to the proposed wind turbine facility ("Project") location immediately prior to the prehearing conference. The following parties were present at the prehearing conference: Eileen Illuzzi; George Buzzell, an adjoining landowner; and David Blittersdorf, on behalf of Renewable Energy Vermont ("REV").<sup>1</sup>

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1. During the prehearing conference, Karen Jenne requested to intervene on behalf of the Town of Derby in her capacity as a member of that town's selectboard. No objections were raised and I granted the request for party status. However, during the technical hearing in this matter on May 23, 2002, Ms. Jenne admitted that her participation in the hearings had not been endorsed by the selectboard or any other municipal legislative body. Accordingly, her

(continued...)

At the prehearing conference, I addressed whether the parties had raised a substantial issue with respect to any of the criteria of 30 V.S.A. § 248 applicable to net metering projects.<sup>2</sup> I concluded that the parties have shown that the pending application raises a significant issue with respect to the following criteria: 30 V.S.A § 248(b)(1) with respect to the proposed project's compliance with the recommendations of the municipal and regional planning commissions, the municipal legislative bodies, and the land conservation measures contained in the town plan; 30 V.S.A § 248(b)(3) with regard to the impact of lightning attracted by the Project upon system reliability and stability; and 30 V.S.A § 248(b)(5) and 10 V.S.A. § 6086(a)(8) with respect to the possible adverse effect upon aesthetics of noise generated by the Project.

The parties agreed to a schedule whereby the Hearing Officer would allow two weeks for negotiations between the parties prior to scheduling an evidentiary hearing. The parties agreed to notify the Hearing Officer if the negotiations prove successful and further hearings become unnecessary. These negotiations ultimately proved unsuccessful and a technical hearing was held on May 23, 2002, at the Derby town offices. At the technical hearing, evidence was presented by the respective parties in support of and in opposition to the Project. Parties in attendance were Petitioner Eileen Illuzzi, adjoining property owner George Buzzell, and David Blittersdorf, on behalf of REV.

### **III. FINDINGS AND DISCUSSION**

Based on the evidence of record and the testimony presented at the hearing, I hereby report the following findings to the Board in accordance with 30 V.S.A. § 8.

1. The Project includes a three-bladed Bergey Excel wind turbine with a 20-foot diameter swept area, installed on a 96-foot tall tilt-up tubular tower. The rated power output of the wind turbine is 10,000 watts. Exh. Pet. 4.

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1. (...continued)  
party status was revoked.

2. These criteria under 30 V.S.A. § 248(b) include (1) (orderly development of the region), (3) (stability and reliability), (5) (environmental considerations), and (8) (outstanding resource waters). Under 30 V.S.A. § 248(b)(5), the Board must give due consideration to 10 V.S.A. § 6086(a)1(B) (waste disposal), 1(D) (floodways), 1(E) (streams), 1(F) (shorelines), 1(G) (wetlands), 4 (soil erosion), 8 (aesthetics, historic sites, natural areas), and 8(A) (necessary wildlife habitat and endangered species).

2. The Project is to be located on the Applicants' property at the top of Ridge Hill Drive in Derby, Vermont. Applicants' house is located at the top of the property and is visible from Ridge Hill Drive on the eastern and southern sides of the property. A garage is located approximately 10 yards northwest of the house and is only partially visible from Ridge Hill Drive on the eastern side of the property. The proposed wind turbine will be located immediately west of the garage. Id.

3. The area across Ridge Hill Drive from the Applicants' property is wooded. The western and northern sides, and a portion of the southern side, of the Applicants' property are also wooded. These wooded areas separate the Applicants' property from the three adjoining property owners and provide a natural visual barrier between the adjoining properties. Id.

4. Mr. Buzzell's residence is located approximately 300 to 400 feet northwest of the proposed turbine. Id.

**30 V.S.A. § 248(b)(1): Orderly Development of the Region**

5. The Project will not interfere with the orderly development of the region, given the land conservation measures as described in the Derby Town Plan. This finding is supported by findings 1-4, above, and findings 6 and 7, below.

6. The 2001 Derby Town Plan includes a section on energy resources. Included in this section is the following language regarding renewable energy:

Renewable energy resources offer long-term advantages over non-renewable sources. Solar, wind, hydro, and wood or wood gasification may become more prominent in the Town's energy mix. The town should support efforts to research and develop these other alternative, ecologically sound energy sources.

Exh. Pet. 5.

7. The Derby Selectboard and Planning Commission have not entered any opposition to the Project. Tr. 5/23/02 at 23 (Pollack).

**Discussion**

In order to comply with 30 V.S.A. § 248(b)(1), a project "must not unduly interfere with the orderly development of the region with due consideration having been given to the recommendations of the municipal legislative bodies, and the land conservation measures contained in the plan of any affected municipality." As noted in the findings above, the Derby Town Plan contains only one general reference to wind energy and no specific reference to wind

turbines. The appropriate municipal legislative bodies of the Town of Derby were given timely notice of the application and have chosen not to participate in this proceeding.

The language of the town plan noted in the findings above is evidence of the town's general support for renewable energy including wind energy. In the absence of any specific language regarding wind turbines and the lack of any opposition to the project from the town's municipal legislative bodies, I conclude that the Project will not unduly interfere with the orderly development of the region.

**30 V.S.A. § 248(b)(5): Aesthetics, Historic Sites, Air and Water Purity, the Natural Environment and Public Health and Safety**

8. The Project will not have an undue adverse effect on the aesthetics and scenic and natural beauty of the area. This finding is supported by findings 1-4 above, and 9-12 below, with due consideration given to 10 V.S.A. § 6086(a)(8).

9. The Applicant will use modern turbine blades designed to minimize noise generation. Tr. 5/23/02 at 19 (Blittersdorf).

10. The decibel level generated by the Project will be approximately 45 decibels at a distance of three to four hundred feet. Tr. 5/23/02 at 18 (Blittersdorf).

11. Surrounding trees will mask any excessive noise generated by the wind turbine. Tr. 5/23/02 at 18 (Blittersdorf).

12. Based on the experience of similar turbines located in Charlotte, the Project should not generate a significant amount of noise. The Applicants have agreed to a condition in the certificate of public good that will require sound testing and evaluation of the Project should any noise issues arise from the Project after it is installed. Tr. 5/23/02 at 15 (Pollack).

**Discussion**

In order to reach a determination as to whether the Project will have an undue adverse effect on the aesthetics of the area, the Board employs the two-part test first outlined by the Vermont Environmental Board in Re: Quechee Lakes Corp., #3W0411-EB and #3W0439-EB,

Findings of Fact, Conclusions of Law, and Order (Nov. 4, 1985) [EB #241], and further defined in numerous other decisions.<sup>3</sup>

Under the Quechee analysis, first a determination must be made as to whether a project will have an adverse impact on aesthetics and the scenic and natural beauty. In order to find that it will have an adverse impact, a project must be out of character with its surroundings. Once a project is found to have an adverse impact on the aesthetics of its surrounding area, further analysis is undertaken to determine whether the adverse effect of the project is "undue."

In this case, Mr. Buzzell has raised concerns regarding the impacts of possibly excessive noise generated by the project upon the aesthetics of the surrounding area. Specific factors considered in determining the noise impacts of the project include evaluation of the nature of the project's surroundings, the compatibility of the project with those surroundings, and the suitability of noise levels generated by the project's noise with the immediate environment.

The Project is located in a rural residential neighborhood characterized by several single family homes on large lots. The Applicant's lot, on which the Project is located, and the areas surrounding the Applicants' property are largely wooded. The project will be located approximately 20 yards from the Applicants' home. Mr. Buzzell's residence is the nearest in proximity to the project and is located approximately 300 to 400 feet from the proposed turbine site. A wooded area comprised mainly of deciduous trees separates Mr. Buzzell's property from the Applicants' property.

Because of the relatively large distances and the wooded areas between the project and adjoining landowners' homes, it is unlikely that the Project will result in excessive levels of noise on adjoining properties. In addition, any noise generated by the project will be, at least in part, masked by the noise of the wind through the surrounding trees. Therefore, the noise generated by the project will not be demonstrably out of context with its surroundings.

The Applicants have also taken steps to mitigate excessive noise generation through the use of modern aerodynamic turbine blades. Further, the Applicants have agreed to a condition to

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3. E.g., Re: John A Russell Corporation and Crushed Rock, Inc., #1R0489-6-EB, Findings of Fact, Conclusions of Law, and Order at 9-10 (Aug. 19, 1999) [EB#723]; Re: James E. Hand and John R. Hand, d/b/a Hand Motors and East Dorset Partnership, #8B0444-6-EB(Revised), Findings of Fact, Conclusions of Law, and Order at 24-25 (Aug. 19, 1996) [EB#629R].

be placed on the certificate of public good which would allow for noise testing should noise levels prove excessive. Consequently, I conclude that the Project will not have an adverse effect on the aesthetics of the area pursuant to 10 V.S.A. § 6086(a)(8) and 30 V.S.A. § 248(b)5 and should be approved as designed, subject to the conditions to which the Applicants have agreed.

### **30 V.S.A. § 248(b)(3): System Stability and Reliability**

13. The Project will not adversely effect the stability or reliability of the electrical system. This finding is supported by findings 1-4, above, and 14-17, below.

14. The area surrounding the Project site has been subjected to lightning strikes over the past years. Tr. 5/23/02 at 45 (Buzzell).

15. Installation of a wind turbine will not increase the amount of lightning activity in a given area. Lightning activity is independent of man made structures. Exh. Pet. 1 and tr. 5/23/02 at 11-12 (Pollack).

16. Similar wind turbine installations have not had lightning related problems. Tr. 5/23/02 at 11-13 (Pollack).

17. The project will be grounded in accordance with applicable electrical safety codes. Tr. 5/23/02 at 13-14 (Pollack).

### **Discussion**

In order to be in compliance with 30 V.S.A § 248(b)(3), the Project must not adversely affect the stability and reliability of the electrical system. Due to the project's height, Mr. Buzzell and other adjoining landowners have raised concerns regarding the Project's possible attraction of lightning strikes to an area which has been frequently subjected to lightning strikes in the past. Neighbors are concerned with the damage that could be caused by increased lightning activity to the electrical system and devices connected to the electrical system. Based upon the above findings and the reasons discussed below, I conclude that the Project should not result in any increased risk to the electrical system or connected devices posed by lightning.

Owners and installers of wind turbines have every incentive to properly ground these structures and take other precautionary measures to protect these structures and their homes from

lightning damage. Wind turbines can represent a substantial investment by purchasers who will want assurances from installers that they are not also subject to potentially costly repairs resulting from lightning damages. In addition, consumers are not likely to purchase devices which increase the risk of lightning damage to the surrounding area. Similarly, installers and manufacturers will have difficulty marketing these systems if they were known to be prone to this type of damage or hazard to the electrical system to which they are connected.

While the turbine tower will be higher than surrounding structures, there is no evidence that these types of structures somehow attract lightning to an area. The height of the structure may in fact act to draw existing lightning activity away from other tall structures. In addition, there is no evidence that lightning strikes to wind turbines are likely to have greater impacts on the electrical system than lightning strikes on any other structure connected to the electrical grid. Therefore, I conclude that the Project should not increase any risk to the electrical system posed by lightning activity.

### **III. Recommendation**

Based on the review of the record in this docket and the reasons set forth in the above discussion, I recommend the Board approve the Applicants' petition for net metering with the conditions noted above.

A Proposal for Decision pursuant to 3 V.S.A. § 811 has been served upon the parties to this case.

DATED at Montpelier, Vermont, this 27<sup>th</sup> day of June, 2002.

s/Gregg C. Faber

Gregg C. Faber  
Hearing Officer

### **V. BOARD DISCUSSION**

We adopt the Hearing Officer's proposed findings of fact and conclusions. The only comments received from the parties on the proposal for decision were from Mr. Buzzell, an adjoining landowner. Mr. Buzzell states that (1) the area described as "wooded," in finding No. 3 of the Proposal for Decision, also contains small fields; (2) finding No. 8 of the Proposal for Decision, which states that the Project does not have an undue adverse affect upon aesthetics, does not reflect the opinions of area residents; and (3) that condition No. 4 in the proposed Certificate of Public Good ("CPG"), which requires the turbine owners to pay for a portion of the expenses of sound testing, precludes complaints regarding noise levels.<sup>4</sup> We address each of these concerns, in turn, below.

Finding No. 3 of the Proposal for Decision states that the areas surrounding the Applicants' home are wooded. This finding is based upon information provided by the Applicants in their net metering application. This application was submitted as evidence during the hearing in this matter and was not objected to at that time. The fact that these areas contain small fields in addition to trees and other foliage is not inconsistent with the Hearing Officer's finding in this regard. Therefore, we see no reason to amend this finding.

Finding No. 8 of the Proposal for Decision states that the Project will not have an undue effect on aesthetics. This finding is supported by findings 1-4 and 9-12. While this conclusion represents the "opinion" of the Hearing Officer, it is an opinion based upon the evidence and testimony presented at the hearing. The Proposal for Decision also contains a detailed discussion of the Hearing Officer's reasoning and the facts it is based upon. This is exactly the kind of factual judgment that a hearing officer should make and explain. We agree with the Hearing Officer that the Project will not have an undue adverse impact on aesthetics in the surrounding area.

Condition No. 4 to the proposed CPG issued with the Proposal for Decision states that:

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4. Mr. Buzzell's also commented on items which were not discussed in the Proposal for Decision. The Board declines to comment in these issues as they are not relevant to the decision of the Hearing Officer.



At a 300-foot radius from the base of the tower, the sound level from the turbine shall not exceed 50dB. If an interested party requests a sound test and the Board agrees it is necessary to have sound testing done, the Applicant shall pay the first \$500 in costs for a sound study, the balance to be paid by the person(s) initiating the request.

The purpose of this condition is to mitigate the expense of any sound testing incurred by an individual seeking to conduct such a test. The condition also sets out a cost recovery methodology for such a study which limits the certificate holders' liability at \$500. Costs in excess of \$500 would be the responsibility of the person initiating the study. The purpose for the sound testing is to determine if the noise levels exceed the 50dB threshold, therefore, expensive, sophisticated and costly tests should not be necessary. Of course, the amount an individual wishes to spend on such a test is left to the discretion of the individual. However, in the absence of such a condition, a neighbor complaining about excessive noise generation would be required to incur the entire cost of any sound testing they might wish to conduct. In addition, the Board has applied this condition to previous net metering CPG's as an incentive to further ensure applicants' compliance with noise generation requirements with satisfactory results. Consequently, we believe that Mr. Buzzell's fears that this condition precludes noise complaints regarding a turbine are unfounded and we see no reason not to include this condition here.

## **VI. ORDER**

IT IS HEREBY ORDERED, ADJUDGED AND DECREED by the Public Service Board of the State of Vermont that:

1. The findings of fact, conclusions, and recommendation of the Hearing Officer in this case are adopted.
2. Applicants' petition for a certificate of public good pursuant to 30 V.S.A. § 248 is approved.
3. A certificate of public good for Applicants' net metering project shall be issued.
4. Operation and maintenance of the net metering system shall be in accordance with the plans and evidence submitted in this proceeding. Any material or substantial change in the project is prohibited without prior Board approval.

5. The net metering system shall comply with applicable existing and future statutory requirements and Board Rules and Orders.

DATED at Montpelier, Vermont, this 1<sup>st</sup> day of July, 2002.

<u>s/Michael H. Dworkin</u>	)	
	)	PUBLIC SERVICE
	)	
<u>s/David C. Coen</u>	)	BOARD
	)	
	)	OF VERMONT
<u>s/John D. Burke</u>	)	

OFFICE OF THE CLERK

FILED: July 1, 2002

ATTEST: s/Susan M. Hudson  
Clerk of the Board

*NOTICE TO READERS: This decision is subject to revision of technical errors. Readers are requested to notify the Clerk of the Board (via mail, e-mail, or in writing) of any apparent errors, in order that any necessary corrections may be made. (E-mail address: clerk@psb.state.vt.us)*

*Appeal of this decision to the Supreme Court of Vermont must be filed with the Clerk of the Board within thirty days. Appeal will not stay the effect of this Order, absent further Order by this Board or appropriate action by the Supreme Court of Vermont. Motions for reconsideration or stay, if any, must be filed with the Clerk of the Board within ten days of the date of this decision and order.*